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REPORT AND RECOMMENDATIONS
of the
HUMAN NUTRITION AND CONSUMER USE RESEARCH ADVISORY COMMITTEE
Developed at its Third Meeting
December 13-16, 1965
Lincoln, Nebraska

CURRENT SERIAL RECORDS

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PREFACE

The objectives of nutrition and consumer use research to (1) analyze consumer needs and problems, (2) determine utility and economy of goods, (3) measure levels of living, and (4) evaluate results and develop guides for maximum well-being, are designed to meet the responsibility of the United States Department of Agriculture for the production of enough food and fiber and in the proper assortment for the well-being of the Nation's citizens.

In preparation for this report the Committee reviewed progress reports and plans and needs for future research by the Agricultural Research Service divisions that conduct human nutrition and consumer use research (hereinafter referred to as NCU or NCU divisions.) It also observed research accomplishments and facilities at the University of Nebraska at Lincoln.

Dr. Ruth Leverton, Assistant Administrator, Agricultural Research Service, acted as chairman for this meeting.

COMMENTS AND RECOMMENDATIONS

General Recommendations

Improved health and well-being. The Committee notes with approval that current research and related programs of NCU have both a primary and ultimate concern for the improved health and well-being of all individuals. American families and their members are our greatest national resource and our greatest users of agricultural products. No other branch of government, nor any private agency, is so uniquely and basically concerned with human nutrition and consumer-use research and its useful applications for improving the health and home life of all families. Hence the Committee considers it essential that such research must be not only a continuing and integral responsibility of the U.S. Department of Agriculture, but that research in this area must be expanded, improved, and strengthened if we are to achieve the "Great Society."

Worldwide need for improved nutrition. Because of the importance of improved nutrition all over the world, and especially in developing nations, and because of the pivotal role of the United States in world affairs, the Committee urges long-range planning in all areas of NCU activity as they relate to worldwide human needs. This will contribute to strengthening our relations with other nations.

Long-range planning and liaison with other agencies. The Department is commended for its efforts to codify research and to project long-range research plans. Because of the potential mutual benefits and because of the impact of such long-range planning on all facets of the Department's research, it is recommended that specific plans be made for representation of the Department's NCU program on the U.S. Department of Agriculture-State Agricultural Experiment Station Committee or by other means to ensure close communication between the joint USDA-SAES Committee and all research divisions of the Department.

The NCU Divisions are commended for their present interdepartmental and interagency cooperation and are urged to expand such cooperation.

Need for an adequate research facility. Highest priority should be given to funding the planning and constructing of an adequate central facility to house all Human Nutrition and Consumer-Use Research Divisions. The new laboratory should provide for space to expand present activities and should include facilities for long-range metabolic studies on human subjects. The facilities should be located on or near a University campus so the NCU Divisions can take advantage of the location to encourage participation of the Division staff in related university activities and vice versa. The central facility is considered to be basic for the conservation of tax monies, for the necessary expanded research programs, and for efficient administration and effective utilization of research for consumers.

Urban and rural nutrition and consumer use research. The Committee reaffirms its belief that the Department should make all possible efforts to include urban as well as rural populations in its Nutrition and Consumer-Use Research. Further, it reiterates the recommendation of the 1964 NCU Advisory Committee that the Department seek modification of its legislative authority to recognize that the contribution of this agency's research is for the improvement of all families, urban as well as rural.

Need to attract competent research scientists. Because the NCU Divisions are having difficulty in filling existing vacancies which require persons of high research competence in the physical, biological, and social sciences, every effort should be made to increase the attractiveness of careers in the Divisions to established scientists as well as to young scientists in these respective fields. To this end the Committee recommends:

1. A re-examination of the Department's policy of limited promotions and low ceilings in the higher brackets. Higher salaries are essential if competent scientists are to be obtained.
2. Reasonable funds should be available for travel to professional meetings, especially for young scientists.
3. Elimination of unnecessary red tape and paper work at all levels and streamlining of procedures for purchasing, publications, etc.
4. The encouragement of individual scientists to explore new approaches, and to develop their own ideas whenever their activities can be justified within the broad objectives of the Department.
5. The earmarking of substantial sums hampers flexibility in exploring what might result in scientific breakthroughs. Thus, although some public concerns are so definite that earmarking of funds for specific research is justified, this Committee suggests that as much latitude as possible in the use of funds be reserved for the scientific research administrators.

Graduate training programs. It is recommended that the U.S. Department of Agriculture seek funds to initiate and sponsor graduate training at universities in fields applicable to work of the NCU Divisions.

Extramural research grants. Grant funds for research should be progressively increased. The Committee suggests the following changes in administrative policy regarding extramural expenditures in the interest of obtaining the greatest return for the money:

1. Elimination of excess paper work by "in house" personnel and institution of more liberal policies in handling and processing grants.
2. Removal of restrictions on use of contract or grant funds for capital equipment. Modern instruments are necessary for successful research in this area and full purchase costs should be considered as allowable expenses of the grant or contract.

3. As the grant program increases, use of outside consultants for advising on the merits of competing proposals should be considered.

Clothing and textiles research. The Committee expresses deep concern over the reduction of research activity in clothing and textiles due to the uncertainty of funding in 1965-66 and the loss of staff. The unique family and consumer orientation of NCU's clothing and textiles research program needs to be retained.

Housing and household equipment research. The Committee expresses great regret at the discontinuance of NCU's involvement in housing and equipment research. That an appropriate group undertake immediately an objective review of the extent and scope of housing and household equipment research underway by industry, universities and private organizations and its availability to consumers is recommended by the Committee. Such evidence is needed to evaluate and make recommendations for research needs not being met, and possible future Departmental involvement in filling such research needs.

Research publications. The Committee expresses its continued pleasure and approval of the high quality and large variety of publications produced by NCU. However, definite concern is expressed over the manner in which a certain commercial publisher has reproduced some USDA publications from NCU research. Therefore, we would urge consideration of steps to avoid the implication of official Government sanction of these publications (e.g., in large print: "United States Government Diet Book"--in the subtitle "The Authorized Publication on How to Reduce") while at the same time in no way decreasing the credit given for the basic work.

The 1965 Yearbook. The Committee applauds the Department's production of the Yearbook, Consumers All, and recognizes the substantial contributions made by NCU staff. This book can become a valuable reference in every home and a teaching tool at many levels--from secondary schools through adult programs. Because of this, the Committee hopes the Yearbook will have the widest possible distribution. The focus of the 1965 Yearbook, indicative of the Department's broad responsibilities toward consumers, emphasizes the need for adequate research to undergird continued and expanded Department activity on behalf of the consumer.

Nutrition

Interrelation of nutrients. Research in human nutrition demands increased emphasis and support. Research on interrelation of nutrients should be expanded in breadth and depth since little information is available on this subject. The role of age, sex, heredity, and stress may influence in man this interrelationship of dietary nutrients. The leads uncovered so far in the Department's research give promise of resolving some of the contradictory results reported in the literature on relation of various components of the diet to indices of abnormal nutrition. Every effort should be made to uncover the mechanism of such interrelations and to project the findings as rapidly as possible in the form of dietary recommendations. There is a need

for long-term nutritional studies on the human with consideration of specific age groups. Human nutritional studies should be extended to include investigation on quantity of different carbohydrates in the diet.

Investigations should be expanded on the effects of exercise and physical fitness on nutritional and physiological responses.

Proteins for developing countries. Increased emphasis should be given to research leading to the utilization for food of protein materials available in developing countries as well as in domestic supplies. From a long-range standpoint such research may be important in meeting domestic food needs.

Liaison between research scientists. There are unique opportunities for closer liaison and collaboration between the nutritionists and the plant scientists and economists concerned with increasing production. Through this, efforts could be focused on the qualitative as well as the quantitative aspects of food production.

Food Science

Nutrient value of foods. The Department is commended for its continued emphasis on analysis of foods for specific nutrients and nutritional value. The content of trace elements in foods and their role in human nutrition needs further emphasis and additional work. Human nutrition and consumer use research is providing essential data on nutrient content of foods.

Nutritional analysis of agricultural products. Funds should be made available to strengthen the program of food science. It is recommended that there be continued emphasis on nutritional analyses of agricultural products with reference to their content of vitamins, minerals, amino acids, and fatty acids. Thus it is emphasized that both the composition and nutritional value of foods be determined with consideration of their processing, storage, and cooking.

The Committee endorses and applauds the work underway on a supplement to Handbook 8 that will include household measures of new food products and foods popularly included in diets of ethnic groups.

Nutritive changes during processing and storage. It is recommended that basic research on food science be emphasized in the search for new staff members to fill the vacancies in this area. There is need for exploration in depth of the chemical, enzymatic and microbiological changes during processing and storage of foods which result in losses in flavor, color, and texture as well as nutritive value.

Nutritional fortification and supplementation. It is recommended also that continued work be done in the field of nutritional fortification and supplementation to improve nutritional value. This is particularly needed in the food distribution programs.

Food Consumption and Diet Appraisal

Nationwide food consumption surveys. The Committee greatly commends the staff for the progress made on the 1965 national food consumption survey and recognizes the significance of the new types of data being collected in the survey. As noted in the 1964 Committee report, information collected through surveys at 10-year intervals is not available from other sources and is essential to many Government and non-profit agencies, educators, and the business community.

The Committee considers it essential that food consumption surveys at 10-year intervals be established in the total program in such a way as to obviate any necessity for having to re-establish their importance each decade or to have other last-minute problems in the authorization for the surveys. Data collected in these surveys are of such importance to so many programs and agencies that the surveys should be regarded as a part of vital United States statistics.

It endorses and commends the NCU for its interdepartmental approach in planning the 1965 food consumption survey. The Committee recommends that an interdepartmental use of the data be considered as equally essential.

A hearty approval is given to the number of publications being planned to disseminate the findings of the nationwide food consumption survey and it is urged that all available resources be utilized to make findings available as quickly as possible.

It also urges that in planning for the dissemination of the findings of this survey, a program be considered for interpreting the data on a regional basis to reach key nutrition education leaders, extension workers, public and private health and welfare officials, teachers, and other users. We believe this orientation should be done by staff members of the Consumer and Food Economics Research Division of the NCU.

The Committee concurs that a series of commodity-oriented studies are necessary if the food consumption data are to be applicable for use in consumer education programs. The Committee recommends that such studies be initiated as soon as feasible.

The Committee recommends that every possible effort be made to obtain data on food consumption and nutritional status from Hawaii and Alaska as members States of the U. S. A. It is imperative that the survey be initiated during the immediate interim years of the 10-year surveys in order to make this supplementary data an integral part of the nationwide survey.

Need for flexibility in budget planning. Anticipating that new and important problems needing further research will be pinpointed as the data from the 10-year survey become available, we urge that budget planning be sufficiently flexible to permit the rapid activation of new or special studies essential to the health and well-being of families as well as to the effective use of the agricultural product.

Special-purpose surveys. We also urge that in interim years, special-purpose studies be made to collect data on special segments of the population (e.g., preschool children, the aged, etc.) that may be too specific to be included in the 10-year survey, these studies to be considered as part of the ongoing program.

We urge the immediate attention to expansion of studies and research on food consumption patterns and nutritional evaluation of preschool children. Also, because of the overall increase in our aging population and the expansion of institutional facilities, including boarding and nursing homes, we urge initiation of research on food use, consumption, and diet appraisal of the aging to include many types of living arrangements.

Thirty million of our citizens continue to be poor. New and further research on food consumption patterns of the low-income population must be undertaken if we are to improve the health and well-being of this segment of our population. The need for such studies is urgent.

Nationwide expenditure studies indicate the American consumer is now spending an increasing portion of his food dollar for food away from home. There is both a gap and a lack of knowledge about the availability of nutrients from institutional methods of food preparation as well as other factors of economy, quality, and safety of foods eaten away from the home. An expanded program of food consumption and nutrition research for these areas is recommended.

We urge that the NCU continue cooperative studies with marketing and economic research for the improved administration and utilization of all the food distribution programs.

Basic concepts in developing food plans. Recently revised and new legislation emphasizes the need for a review and modification of the basic concepts used in developing the food plans. We commend the NCU for its initial consideration to review current social policies and attitudes in the establishment of the food plans and concur with previous committee recommendations in this area. We now deem it essential that such plans be reviewed and revised as soon as possible if the health and welfare of our population is not to be impaired.

Motivational and sociological factors of food consumption. We reiterate the statements of previous committees concerning the need for studies pertaining to motivational and sociological factors of food consumption and for the evaluation of the interrelationship among existing situational forces. We reaffirm previous recommendations that such studies are urgent and must be interdisciplinary if they are to be an effective factor in improving the health of all segments of our population. We especially urge that such studies be given priority. Unless the food consumption and health status of the disadvantaged are improved, the health of our total population will be impaired.

The 1967 Nutrition Education Conference. We endorse and support the recommendations made by previous committees for the 1967 Nutrition Education Conference. The conference should provide excellent opportunity for an initial interpretation of the findings of the nationwide food consumption survey. We consider it essential that the NCU continue to cooperate with the Interagency Committee on Nutrition Education. We suggest that increased emphasis be given to newer methods of presenting information and materials. The Committee also urges the inclusion of ideas designed to help leaders who work with specific population groups of all ages from preschool through senior citizens, and families in low-socio-economic areas.

Family Economics

The 1960-61 consumer expenditure survey. The preparation and publication of summary tabulations and descriptive detail of the 1960-61 consumer surveys of expenditures and income in cooperation with the Bureau of Labor Statistics is commended. Since these reports provide data on both urban and rural levels of living, unavailable for over 20 years, educational institutions and agencies concerned with family economic welfare have available to them necessary background information for interpreting needs and developing their programs. The availability of these statistics and of the analytical papers already prepared, in process, or planned are invaluable to many public and private agencies and business as well as to educators and public policymakers.

Family Economics Review. This Committee is gratified to note the even heightened interest in and utilization of Family Economics Review as indicated especially by the need for rerunning special-focus issues such as that of March 1965 which dealt with economic problems of low-income families. We strongly recommend continued departmental emphasis on this publication and encourage all efforts to gain it even wider distribution.

Determination of poverty level. The Committee fully supports the Department's plans to initiate research aimed to developing improved criteria for identifying poverty-stricken families. Close liaison with other departments and agencies on this topic is suggested to ensure that any method of adjusting the urban poverty line to rural living situations will be compatible with other efforts to redefine the poverty level. Further efforts should be made to determine expenditures of urban and rural families necessary to achieve comparable levels of living. The Committee urges, especially in long-range planning, further expenditure and consumption studies of families at various stages of the life cycle, especially the elderly consuming units.

The continuance of plans for identifying groups of factors and patterns in their use which may have contributed to the rise from poverty of selected families, including the use of family and community resources, is urged by the Committee.

Development of clothing plans. The Committee strongly emphasizes the need for establishing criteria of adequacy for categories of expenditure in addition to food. Particularly, plans to initiate research on clothing inventories and methods of acquisition with a view toward the development of low- and moderate-income clothing plans are endorsed. Since clothing standards are affected by socio-psychological as well as physical factors, consideration should be given to the obtaining of families' interpretations of what is adequate, as well as identification of low- and moderate-income clothing needs by more objective methods.

Housing expenditures as related to economic problems. In light of today's family mobility and the frequent turn-over in home ownership (average duration of FHA mortgage is 7 years), it is recommended that the Department give consideration to studying the proportion of housing expenditures which is in fact consumption versus that which is in effect investment. Information is needed on conditions affecting the direction and magnitude of change in this consumption-investment ratio to comprehend the impact of this on accumulation of family wealth and to make possible better counseling of families on economic problems.

Consumer credit. The Committee recommends the initiation of studies of the use and cost of consumer credit. Studies of credit would facilitate better use of family financial resources by providing improved information for counseling. A specific suggestion, in light of the widespread use and easy availability of consumer credit on a wide array of non-food goods and services, would be to attempt to estimate the effect which these non-food credit obligations may have had on lowering food purchases at retail. Further, experimental designs might be developed to allow estimates of the potential increase in use of food items if credit were available on food.

Service and maintenance of household equipment. Again the need is underscored for follow-up studies on the rate of replacement of household equipment to determine trends in service-life expectancy of household equipment. Also, a crucial need exists for information about servicing and maintenance costs of such equipment. Together these would provide information about total household equipment costs that would be useful to consumers and suppliers of such durables and services.

Farm and urban family living. Expansion of research in the social and economic dimensions of family life is encouraged. For example, in light of the U.S. farm-to-city migration, it is suggested that work be undertaken to determine differences in farm and urban family living, and to develop guidelines which might be useful to families who anticipate changing location as well as to speed the social and economic adjustments of those who actually make such moves.

Clothing and Textiles

The Committee is pleased that clothing and textiles research has been reinstated, however, it is disturbed by the loss of momentum due to uncertainties of funds and loss of personnel. It is hoped that every effort will be made to accelerate the program.

Studies on body measurements. The Committee is pleased to learn of the Department's plans for exploratory research on body measurements for women to determine if change in body proportions in the past 35 years warrant a complete new study. In addition it is recommended that studies on body measurements be extended to the elderly.

Stain removal from durable press fabrics. The Committee anticipates that stain removal from fabrics will become a more difficult problem because of the increase in the use of durable press fabrics of all cotton and cotton blends. Research should be conducted to determine the most effective methods of removing chief types of stain from durable press fabrics. Results of the research can be disseminated to the consumer by appropriate revisions of the home and garden bulletin on stain removal.

Pesticide and virus contaminated clothing. The increased use of pesticides will result in more and more users having their clothes contaminated with these chemical products. The Committee recommends that research be initiated to determine the most effective method of laundering clothes contaminated with selected commonly used pesticides.

Research conducted under contract by the Southern Research Institute has shown that some viruses remain alive on fabrics for significant periods of time. It is recommended that a study be made to determine whether viruses on clothing survive after home type laundering in sufficient quantities to be of epidemiological significance and whether they are transferred from virus contaminated clothing and household textiles to uncontaminated articles during laundering. If so, methods of control should be investigated.

Clothing make-overs. Many clothing items are discarded long before the end of their useful life. Low-income families could dress themselves better with low expenditures if they could alter or repair discarded clothing. The Committee recommends that work be done on updating the procedures developed for making useful garments from out-of-date garments and for making children's clothes from discarded adult clothing. The information should be of particular value with regard to the active programs in Appalachia and other depressed areas.

Needs of handicapped children. The Committee recommends that the study to determine clothing needs of physically handicapped children be resumed and expanded to include needs of mentally handicapped children.

Other ongoing activities in clothing and textiles are recognized and supported.

